

Translation

PATENT COOPERATION TREATY

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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

20/512045

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference N729PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/FR2003/001082	International filing date (day/month/year) 04 avril 2003 (04.04.2003)	Priority date (day/month/year) 24 avril 2002 (24.04.2002)
International Patent Classification (IPC) or national classification and IPC C07K 14/025		
Applicant NEOVACS et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>5</u> sheets, including this cover sheet. <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT). These annexes consist of a total of _____ sheets.
3. This report contains indications relating to the following items: I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 21 novembre 2003 (21.11.2003)	Date of completion of this report 21 May 2004 (21.05.2004)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

I. Basis of the report

1. With regard to the elements of the international application:*

- ☒ the international application as originally filed
- ☒ the description:
pages _____ 1-55 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the claims:
pages _____ 1-23 _____, as originally filed
pages _____, as amended (together with any statement under Article 19
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the drawings:
pages _____ 1/13-13/13 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____
- ☒ the sequence listing part of the description:
pages _____ 1, 2 _____, as originally filed
pages _____, filed with the demand
pages _____, filed with the letter of _____

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☒ contained in the international application in written form.
- ☒ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☒ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☒ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages _____
- ☐ the claims, Nos. _____
- ☐ the drawings, sheets/fig _____

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

Novelty (N)	Claims	1-23	YES
	Claims		NO
Inventive step (IS)	Claims	1-23	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-23	YES
	Claims		NO

2. Citations and explanations**1. Reference is made to the following documents:**

D1: WO 99 10375 A (LOMBARDO BENCHEIKH ANGELA;
SMITHKLINE BEECHAM BIOLOG (BE); BRUCK C)
4 March 1999 (1999-03-04);

D2: US-B1-6 235 523 (GAJEWCZYK DIANE M ET AL)
22 May 2001 (2001-05-22);

D3: FR-A-2 794 371 (BIOVECTOR THERAPEUTICS)
8 December 2000 (2000-12-08);

D4: WO 96 19496 A (EDWARDS STIRLING JOHN; CSL LTD
(AU); COX JOHN COOPER (AU); FRAZER) 27 June 1996
(1996-06-27);

D5: EP-A-0 451 550 (BEHRINGWERKE AG) 16 October 1991
(1991-10-16);

D6: WO 01 14416 A (CHEN LING; MERCK & CO INC (US);
SCHULTZ LOREN D (US); WANG XIN MIN) 1 March 2001
(2001-03-01).

2. Novelty And Inventive Step (PCT Article 33(2) and 33(3))

The present application relates to a vaccine composition that has no preventive or curative immunosuppressive properties with respect to cancer that is caused by a *Papillomavirus* infection. The active principle is a non-immunosuppressive mutated E7 protein containing the amino acid sequence.

Said mutated proteins contain amino acid sequences 1-19, 20-29 or 30-98 of SEQUENCE ID NO. 3.

None of the prior art documents discloses the subject matter of the application. It follows that claims 1-23 are considered to be novel.

Document D1 is considered to be the closest prior art. The content of D1, either alone or in combination with that of any one of documents D2 to D6, does not suggest the solution to the problem to be solved, i.e. that of developing an immunogenic or vaccine composition, which is non-immunosuppressive with respect to HPV infections.

As a result, claims 1-23 fulfil the PCT requirement of inventive step (PCT Article 33(3)).

3. Industrial applicability (PCT Article 33(4))

The subject matter of claims 1-23 appears to fulfil the requirement of industrial applicability.